DOCUMENT RESUME

ED 336 094 IR 053 642

AUTHOR Niemeyer, Mollie D.
TITLE Evaluation of the Missouri Statewide Bibliographic Database on CD-ROM.
INSTITUTION Central Missouri State Univ., Warrensburg.
PUB DATE 90
NOTE 107p.
PUB TYPE Reports - Research/Technical (143) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS *Bibliographic Databases; Electronic Mail; Library Automation; Library Cooperation; Library Statistics; Library Surveys; *Machine Readable Cataloging; Online Catalogs; *Optical Data Disks; Shared Library Resources; State Programs; Telecommunications; *Union Catalogs; User Needs (Information); *Use Studies
IDENTIFIERS *Missouri

ABSTRACT

In 1988 the State of Missouri became involved in a project to develop a statewide bibliographic database in which a CD-PAC (a library catalog contained on CD-ROM) of the machine-readable records available from all types of libraries was produced. This study was conducted to assess the impact of the Missouri Statewide Bibliographic Database (MCAT), along with the use of ALANET for communications, and to report the findings. A questionnaire was mailed to all recipients of the initial database. The 166 responses received accounted for 70.3% of the total population. Based upon the information supplied by the users, it is evident that the MCAT is being used, although the extent of that use varies. It is noted that both the size and type of the library in question affects the degree of MCAT use. While smaller libraries without a wealth of other resources welcome the MCAT as a useful tool, it is the public libraries that comprise the majority of users. The primary reason given for non-use was the lack of necessary equipment. It is also observed that statewide databases are under consideration in other states. Missouri has been among the pioneers to implement a statewide bibliographic database, and its assessment will aid the Missouri State Library in planning future developments. A copy of the survey instrument and comments from the survey respondents have been provided. (33 tables) (Author/MAB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED336094

EVALUATION OF THE MISSOURI STATEWIDE BIBLIOGRAPHIC DATABASE ON CD-ROM

by

Mollie D. Niemeyer
Coordinator of Technical Services
Central Missouri State University
Warrensburg, Missouri 64093

IR053642

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Mollie D. Niemeyer

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

ABSTRACT

The purpose of the study was to conduct an assessment of the Missouri Statewide Bibliographic Database (MCAT), along with the use of ALANET for communications, and to report the findings. A questionnaire was mailed to all recipients of the initial database. Respondents numbered 166, accounting for 70.3% of the total population.

Based upon information supplied by users, it is evident that MCAT is being used. The extent of that use varies. Both size and type of library affect the degree of MCAT use. Smaller libraries without a wealth of other resources welcomed MCAT as a useful tool. Public libraries comprise the majority of users. The number one reason given for non-use was the lack of necessary equipment. Statewide databases are under consideration in other states. Missouri has been among the pioneers to implement a statewide bibliographic database and its assessment will aid the Missouri State Library in planning future developments.

TABLE OF CONTENTS

LIST OF TABLES 3

INTRODUCTION 7

Statement of the Problem 9

Purpose of the Study 9

Significance of the Study 10

Limitations of the Study 10

Definition of Terms 11

Research Questions 12

REVIEW OF THE LITERATURE 13

WISCAT 15

CD-ROM in Illinois 16

ACCESS Pennsylvania 18

MaineCat 21

Background of MCAT 22

Summary 27

METHODOLOGY 29

Population 30

Instrumentation 30

Data Collection 31

ANALYSIS OF THE DATA 32

Population Response 32

Non-users of MCAT 39

Use of MCAT 39

Communications Methods 45

Hardware/Software/Documentation Features . 48

Impact of MCAT on Resource Sharing 59

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS 69

Use of MCAT by Libraries in Missouri . . . 70

Variety of Uses of MCAT 71

Communications Methods 71

Opinions on the Standard Features of the System 72

Effect of MCAT on Resource Sharing 74

Strengths and Weaknesses of MCAT 75

Recommendations for Further Study 76

REFERENCES 78

APPENDICES 81

A. Assessment Questionnaire 83

B. Questionnaire Letter 88

C. Follow-up Letter 89

D. Comments from Respondents: Helpful Features of MCAT 90

E. Comments from Respondents: MCAT Improvements Needed 95

LIST OF TABLES

TABLE		
1	Respondents to Questionnaire by Type of Library	33
2	Respondents to Questionnaire by Size of Collection	34
3	Respondents to Questionnaire by Geographic Region	35
4	Non-users of MCAT by Type of Library	36
5	Non-users of MCAT by Size of Collection	37
6	Non-users of MCAT by Geographic Region	38
7	Reasons for Not Using MCAT	39
8	Uses of MCAT by 125 Respondents	41
9	Average Daily Use of MCAT in Minutes	42
10	Average Daily Use of ALANET in Minutes	43
11	Type of Staff Using MCAT	43
12	Hardware Configuration of MCAT	45
13	ALANET as Method of Transmitting/Receiving Interlibrary Loan Requests	46
14	Methods Used to Transmit Interlibrary Loan Requests Prior to Use of MCAT	47
15	Browse Search Mode as Rated by MCAT Users	48
16	Express Search Mode as Rated by MCAT Users	49
17	Boolean Searching as Rated by MCAT Users	50

18 "Anyword" Searching as Rated by MCAT Users 52

19 Truncated Searching as Rated by MCAT Users 53

20 Rating of MCAT Searching Response Time . . 55

21 Clarity of On-screen Directions 56

22 Readability of Screens 57

23 General Ease of Searching 58

24 Disk Changing Procedure 58

25 BRODART Inc., LePac Reference Manual . . . 59

26 Effect of MCAT on Incoming Interlibrary Loan Requests 60

27 Effect of MCAT on Outgoing Interlibrary Loan Requests 60

28 Effect of MCAT on Fill Rate of Interlibrary Loan Requests 61

29 Effect of MCAT on Blind Search Interlibrary Loan Requests 62

30 Percentage of Interlibrary Loan Requests Verified Using MCAT 63

31 Number of Monthly Incoming Interlibrary Loan Requests Before and After Implementing MCAT 64

32 Number of Monthly Outgoing Interlibrary Loan Requests Before and After Implementing MCAT 65

33 Number of Average Monthly Incoming and Outgoing ALANET Transactions 65

INTRODUCTION

In recent years, a number of states have ventured into the realm of experimenting with the development of statewide bibliographic databases. A statewide bibliographic database can be defined as a file of machine readable bibliographic records which is intended to be a comprehensive source of the bibliographic holdings of libraries within a state. West Virginia and Illinois began their statewide databases as fully integrated, interfaced online systems which link the resources of public, college, and special libraries to users in libraries and elsewhere. More recent databases have utilized the rapidly expanding CD-ROM technology (Glazer, 1985). CD-ROM (Compact Disk - Read Only Memory) is still relatively new to the information industry; thus, few vendors have been producing these products for more than two or three years. Libraries which have plunged into major projects using this technology have been pioneering inlargely uncharted waters. Only seven vendors offer CD-ROM public access catalogs or CD-PACs. Brodart, Inc. introduced the first CD-PAC in the summer of 1985 (Bills &Helgerson, 1988).

CD-ROM technology uses a tiny laser light beam to place 15,000 tracks of information per inch on a 4.75 inch silver disk. Each disk can be "read" with a laser reader attached to a microcomputer. Special searching

software enables the user to retrieve information from the disk and can also assist the searcher through prompts on the screen. "CD-ROM laser technology may be as significant for finding and accessing information as Gutenberg's technology was in producing and storing it" (Cassell, 1987, p. 34-35). The volume of information that can be stored and retrieved has caused libraries throughout the country to consider CD-ROM purchases. CD-ROM has been called the "new microfiche" as it replaces the cumbersome and difficult to use COM (computer output microform) catalogs. A single compact disk can store the information contained on 60 hard disk drives of a microcomputer, 1500 floppy diskettes, or 250,000 pages of text (Moore, 1987, p. 12-13).

The state of Missouri contracted with Brodart, Inc. in the spring of 1987 to produce a CD-PAC of the machine-readable records available from all types of libraries. The Missouri State Library secured funding to furnish public libraries throughout the state with the hardware and software to begin creating machine readable records of their collections using the Bibliofile system. Brodart processed records from Brodart customers who already had machine readable records, from those libraries that had been using Bibliofile, or from records which the Missouri Library Network Corporation extracted for the Online Catalog Library Center (OCLC) member

libraries. These records were produced on four compact disks in the public access catalog (LePac) marketed by Brodart. In October 1988 the CD-PAC catalog was distributed to Missouri libraries participating in the project. A communications software component was made available to public libraries. The Missouri State Library assumed all telecommunications costs for interlibrary loan transactions requested by any library using the database. ALANET was the communications tool chosen and was made available to participants in January 1989.

Statement of the Problem

A little more than one year has passed since the Missouri Statewide Database (MCAT) was distributed to participating libraries. The communications tool has been in use for more than nine months with little or no knowledge of what impact MCAT has had on libraries in Missouri. An assessment of the success or failure of MCAT in its first year of operation needed to be conducted to determine the future course of the statewide database. Experience with its use is critical to future modifications and developments.

Purpose of the Study

The purpose of the study was to conduct an assessment of MCAT and the use of ALANET for communications and to report the findings on the impact

MCAT has had based upon the information supplied by users of the product. Data concerning the database illustrated where the perceived problems existed. The data will be used to assist the Missouri State Library in making decisions regarding the future development of the statewide database.

Significance of the Study

The report will be of interest to users since it may provide new applications for use of the database. It will bring attention to those aspects of the database that require reevaluation and it may also become a planning tool for improvements in the MCAT system. Ideally there will continue to be ongoing assessments of the database resulting in new features and modification of current ones. An interactive dialogue between the Missouri State Library and individual users of the database will have an impact on the future efforts within the state to promote resource sharing and to increase the effective buying power of each library dollar.

The report will also be of interest to other states which may be planning to develop or assess a statewide bibliographic database. Information regarding the impact of the database on library service in Missouri will be useful in determining if a CD-ROM format is a viable option for other states to pursue.

Limitations of the Study

The study focused on those libraries in Missouri which have bibliographic records in MCAT. At the time of the survey some of these institutions did not have the equipment necessary to make use of the statewide database on CD-ROM. While all public libraries which met certain criteria were supplied with hardware to use the database, other types of libraries were expected to provide their own equipment. Those libraries which did not have the equipment to make use of the database were unable to assess its impact.

All libraries listed in the directory of participants were surveyed with the exception of the researcher's own institution and another library whose staff members were asked to pretest the survey.

Definitions of Terms

ALANET -- a telecommunications network operated by the American Library Association.

CD-PAC -- compact disk-public access catalog, a library catalog contained on CD-ROM

CD-ROM -- compact disk-read only memory, an information storage device wherein information is stored on a laser optical disk and decoded with a configuration of a microcomputer and a CD-ROM player.

Interlibrary loan -- a request from one library to another library to provide a particular item of materials

or photocopy of materials.

MCAT -- the Missouri Catalog, the statewide bibliographic database on CD-ROM.

Statewide bibliographic database -- a file of machine readable bibliographic records which is intended to be a comprehensive source of the bibliographic holdings of libraries within a state.

Research Questions

The study will address these research questions:

1. How is the statewide database being used other than to support resource sharing?

2. What is the impact of the Missouri Statewide Bibliographic Database on resource sharing in Missouri?

3. What are the strengths and weaknesses of the statewide database?

REVIEW OF THE LITERATURE

A search of library literature relevant to the development of statewide bibliographic databases indicates that little information has been published. A number of states have looked at the possibilities of creating a database of library holdings, usually within an overall plan for library automation. An online search of the ERIC database and a manual search of Library Literature resulted in relevant articles and ERIC research reports. None of the citations found in Dissertation Abstracts and only two in Library and Information Science Abstracts (LISA) pertained to statewide or regional bibliographic databases. When limited only to CD-ROM technology products, the volume of published information was smaller. The subject term "CD-ROM" first appeared in the 1985 volume of Library Literature and was a cross-reference to the topic "Optical Disks". Many citations on the topic CD-ROM can be located in current literature; however, the researcher was primarily concerned with statewide bibliographic databases.

The state of New Jersey was considering the development of statewide databases by 1980. The Computer application Task Force of New Jersey listed the "creation of a statewide bibliographic database and standards for machine-readable records and the creation of a statewide

union catalog" among a list of recommendations (New Jersey Computer Application Task, 1980). A 1987 report from the New York State Library recommended that a statewide bibliographic database be developed (New York State Library).

The idea for a statewide database in Missouri was under consideration in the late 1970's. The need for libraries to share their resources and to take maximum advantage of computer and communications technology led the Missouri State Library to commission a study to investigate the possibilities. Published originally in December 1978 and somewhat revised in January 1979, the report by Becker and Hayes, (1979) focused on the plans to improve library service in the state and to make it more feasible for libraries to implement new technology. The number one priority recommended was that Missouri "establish a statewide database of library records" (p.56).

A report published in 1980 contained the results of a survey of Missouri libraries assessing their needs for a statewide database. Analyzing the current state of library automation, the survey examined the desirable functions of a statewide database, the materials which should be included, and ways for financing and maintaining the database (Palmour & DeWath, 1980).

WISCAT

A prototype for the state databases on CD-ROM was the WISCAT COM (computer output microform) catalog produced by the Wisconsin Division of Library Services from a statewide bibliographic database of 1.8 million titles and 5.7 million holdings. Wisconsin's official policy on library automation in 1982 included such objectives as "developing and maintaining a statewide bibliographic database, standardizing bibliographic records following the MARC II format, supporting retrospective conversion by awards of Library Service and Construction Act (LSCA) funded grants, and developing a microcomputer program to assist libraries with automation" (Bocher, 1984, p. 267). These same objectives were targeted by Missouri in the development of its statewide database.

Prior to producing the WISCAT on CD-ROM, a study was made comparing the cost effectiveness, timeliness, and ease of use of the existing microfiche catalog to a CD-ROM model and an online searching model. The cost of CD-ROM was determined to be less per copy than producing the microfiche; however, equipment costs were likely to increase. It was projected that CD-ROM costs would decrease in the future. A CD-ROM database would always be dated as would the microfiche. Frequent re-mastering of the disks and supplemental disks could provide more

current information. Obviously, the timeliness of online access would be greater because it could be updated on an ongoing basis.Finally, with regard to ease of use, CD-ROM was described as more "flexible" than microfiche. The durability of the disks was thought to be a plus and equipment failure was projected to be less problematic than with an online environment. The CD-ROM system also could serve as a back up system for an online catalog.

Based on these conclusions, the report of the Council on Libraries and Networking Development recommended that an experimental database be produced on CD-ROM (Wisconsin Council on Library and Network Development, 1987). The WISCAT COM catalog was produced by Brodart, Inc., which became the first vendor to offer a bibliographic catalog in CD-ROM format. Today WISCAT is produced on CD-ROM as the Brodart LePac.

CD-ROM in Illinois

In 1985 another early venture using CD-ROM technology for a large bibliographic database began in Illinois. The University of Illinois at Urbana-Champaign received an LSCA grant via the Illinois State Library. The purpose of the grant was to determine if the CD-ROM technology was advanced enough to make it feasible to create a database of over 900,000 records for distribution to other libraries.

The University of Illinois had already produced an

online catalog, which formed the basis of an online statewide database using the Western Library Network (WLN) software. This database also was initially funded with a grant (LSCA) in 1980. Originally, the product in Illinois was planned for 12 inch videodisks. The rapid advancement of technology; however, led to the decision to use the compact disk. Brodart Company's LePac system was chosen as the vendor for the production of this database (Watson & Golden, 1987).

The Illinois experiment with the CD-ROM state database was tested at four sites: three public libraries and a junior college library. Responses were collected in three ways: 1) a random sample of users completed a patron reaction card, 2) members of a University of Illinois Library and Information Science class were asked to evaluate the system with a detailed questionnaire, and 3) library staff at the four sites were interviewed in group sessions. Each of the four sites were allowed to place the catalog wherever they chose. Three sites had the catalog in a highly visible area, while one had located it in a carrel behind the reference desk. The visible catalogs resulted in the more favorable overall reaction from the users.

The majority of large libraries in Illinois already had either direct or dial access to the online Library Computer System of the University of Illinois, which was

the basis for the state online union catalog. That catalog became operational in 1984. More recently, the holdings of all libraries in ILLINET (the state resource sharing network) have been added, expanding the online catalog into a true statewide database (Watson, 1987).

ACCESS Pennsylvania

Unlike other states which have developed statewide databases, Pennsylvania's ACCESS Pennsylvania database is structured around school libraries. The objectives of the project were (and still are) to "produce a union catalog that would facilitate resource identification and retrieval and to develop automated support capabilities within the libraries served by the project" (Epler & Cassel, 1987, p. 81). ACCESS Pennsylvania is a joint effort of the State Library of Pennsylvania, the Pennsylvania Department of Education, and the Brodart Company. Two goals of the project involved school libraries. One was to "integrate online searching into the school library media curriculum." The second was to bring school libraries into the state network for resource sharing (Epler, 1988, p.43). The technology chosen, compact disk, was selected because the work with consultants and various studies demonstrated that CD-ROM would be most responsive to the needs of school library users. The product would provide access to the collections of an individual school library and to those

of other school, public, college, and university libraries in the state (Epler & Cassel, 1987).

The first CD-ROM catalog for ACCESS Pennsylvania was made available on a single 4.75 inch compact laser disk containing 653,000 unique records from 153 participating libraries and was first distributed in September 1986. The relatively inexpensive laser reader connected to a standard IBM microcomputer enabled libraries and library patrons to search and locate a single record in the database in just a few seconds. According to Epler and Cassell (1987), a scheduled remastering of the database in September 1987 brought the total number of records in the database to approximately 1.4 million, which were contained on two CD-ROM disks. The effectiveness of ACCESS Pennsylvania varied by the size and type of the library. Larger library staffs tended to use the system primarily for interlibrary loan requests. In smaller public and school libraries, the product was useful for both interlibrary loan and patron use. Because interlibrary loan transactions are new to the majority of school libraries, an entirely new realm of possibilities opened for them. The CD-ROM database made it possible for libraries that had never loaned a book on interlibrary loan to do so and to make requests to libraries that had never loaned an item. Even the small isolated library without any previous library automation

had access to holdings in any participating Pennsylvania library.

A 68% average increase in interlibrary loan transactions was reported in the first year of use. Also, most libraries, especially schools, reported a 300- 500% increase in their own circulation. This is attributed to the ease of locating materials on the part of patrons who were using the CD-ROM database as a public access catalog. Academic libraries that had supported interlibrary loan requests from participating schools looked upon the database as an important public relations and outreach service for their institutions.

A new version of LePac from Brodart, Inc. included the ability to download records to floppy disk. This version will be used to update records for deletion or correction in re-mastering of a database (Gatcheff, 1987). Other positive impacts cited by Epler and Cassell (1987) related to the implementation of a state database included a) the support of politicians actively involved in providing increased funding for libraries, b) the increased development and sharing of telecommunications and document delivery systems, c) greater respect gained by libraries and librarians from the local communities due to the enhanced capabilities, and d) the realization of the need for the "weeding" of collections and in planning and promoting collective development policies.

MaineCat

MaineCat was initiated via state legislation and enacted into law in the spring of 1987. "An Act to Open Maine Libraries to Modern Information Technology" was the first step in the production of the statewide database on CD-ROM (Andre, 1989, p. 341). The state of Maine announced the distribution of the database in April of 1989. AutoGraphics, Inc. was the vendor chosen to produce the database. Designed to support interlibrary loan, cataloging, public access, and reference services, MaineCat was funded as an ongoing program from general state revenues.

More than 950,000 unique titles from over 1.8 million source records were distributed on two compact disks to 114 libraries in the state. The three objectives established in the state were met when the first edition of the database was released. According to Karl Beiser, Library Systems Coordinator for the Maine State Library, MaineCat allows users to

> locate materials in libraries across the state, for more effective use of resources in all kinds of libraries. It lays the foundation for future automation work based on machine readable catalog records and it provides a powerful supplement to local catalogs in libraries than cannot afford

costly systems" (Autographics produces first edition, 1989).

MaineCat was envisioned not only as the statewide catalog of library materials but also to serve as a base for a future electronic mail system. It was expected to be flexible and easy to use, and searchable by author, title, subject, and standard numbers. Truncated searching and combined searches are also features of the MaineCat software (MaineCat Fact Sheet, 1987).Currently, other CD-ROM products are entering the market: General Research Corporation's LaserGuide, the Intelligent Catalog from Bibliofile, and a write-once disk system from MARCIVE/PAC. Some of these systems have record limitations that would preclude the use for a statewide database. The WLN Network implemented a database of 2,000,000 records on LaserCat in over 100 libraries in the Pacific Northwest in early 1987. This database consisted of three disks running on two drives. Other states are also working in this area. Kansas has a product created by the Brodart Company, and Louisiana was exploring the possibilities in 1987 (Watson & Golden, 1987).

Background of MCAT

As with many plans, the carrying out of the recommendations from the late 1970's and early 1980's waited in Missouri until circumstances provided the

catalyst for the implementation. In the early fall of 1987 the Missouri State Library was confronted with a dilemma. The state had determined that the method of administering LSCA funds must be restructured immediately, requiring a commitment for the expenditure of between $100,000 and $200,000 within six weeks. Under these circumstances it is usually difficult to select a wise use of funds. Missouri was fortunate because the need to develop a statewide database for interlibrary loan use and the need to introduce library automation into many Missouri libraries were immediate concerns (Davis, 1987).

The advantages of CD-ROM influenced the state library of Missouri as it sought to develop a database of library holdings. First, CD-ROM allows a tremendous amount of information to be stored on a small disk. The access to the data on the disk via a microcomputer and a CD-ROM player provides searching without the expense of long distance telephone charges and costs associated with downloading or offline printing of citations. It also provides a logical, rather than linear form of searching, enabling several key subject words to be searched at one time. Finally, it can be used with standard microcomputer and disk player equipment (Epler & Cassell, 1987).

The Missouri State Library moved quickly to change a

difficult situation into one of opportunity for the state. With the funds allocated, the state library was able to provide automation equipment to all the public libraries in the state, many of which had no automation equipment. The result was that two problems of any automation project were resolved. First, the number of libraries which were able to participate in the statewide database included virtually every public, and state supported academic library. Private, special, and school libraries were included if they had machine readable records to contribute to the database. These libraries received the database disks and the software to use it, but were expected to fund the purchase of necessary hardware. Second, because the state funded the majority of the project, there was the ability to ensure that libraries which qualified for state funded equipment had compatible hardware.

The state library made the following offer to all public libraries. Any public library would have funding to purchase automation equipment if the libraries:

> 1) had a voted tax support, 2) submitted an annual report to the State Library in the preceding year, 3) agreed to make its holdings available to other Missouri libraries through interlibrary loan and follow protocols determined by the State Library, 4) agreed to make any machine-readable records it owned

or which it produced later available to the State Library for use in a statewide database, and 5) purchased certain specific and compatible computer equipment prior to the September 30, 1987 deadline for spending the money. (Davis, 1987, p. 4-5)

State academic libraries also benefitted. Sufficient funds were available from LSCA Title III to pay for a Hitachi 1503-S CD-ROM player for each if they agreed to requirements three through five listed above. The Missouri Library Network Corporation (MLNC) offered the equipment at a reduced price which enabled the dollars to stretch further. Libraries were not obligated to purchase from MLNC, but the State Library would not reimburse libraries for a higher cost than the price available from MLNC. Public libraries who qualified for participation in the project received reimbursement for the Bibliofile system to convert local records to machine readable form, so long as they served a total population of 2,000 and were not subscribers to a bibliographic utility or were already Bibliofile users (Davis, 1987).

By November 1987, a Request for Proposal (RFP) was being written for the database on CD-ROM. Other states were contacted for information on their RFPs for similar projects. Vendors were asked to demonstrate their CD-ROM catalog products. In February 1988, the draft of the RFP was submitted to the Missouri Office of Administration,

Division of Purchasing. The particular requirements for the system were added to the RFP, and it was sent to vendors in April. Proposals from vendors were filed by June, 1988, and the contract was awarded to Brodart, Inc., for the LePac system, in late June (Logsdon, 1988).

In recent months library literature has announced CD-ROM database projects in a number of states. Nevada installed a statewide CD-ROM catalog, LaserGuide, produced by General Research Corporation, according to a short statement published in Wilson Library Bulletin in November 1988. 1.2 million holdings for over 70 libraries comprised the database. Some 60 workstations were installed in public and academic libraries, the State Department of Education, the Supreme Court Library and the Nevada State Library (Nevada installs CD-ROM Cat, 1988).

The Washington Library Network released a portion of its network via LaserCat on three compact disks. Plans were to update the disks quarterly. The original issue contained the holdings of 250 libraries (WLN releases LaserCat, 1987).

MaineCat, previously mentioned, was announced as approved by the state legislature in Wilson Library Bulletin and Library Journal in September and October 1987. Missouri's project was publicized in the November 1987 issue of Wilson Library Bulletin (Missouri libraries

The latest information on a CD-ROM statewide database was detailed in the galley proofs of a forthcoming article by Paula Watson. The article presents the results of the Illinois project to "assess the effectiveness of distributing catalog records on CD-ROM to facilitate resource sharing and reference." The feasibility question is now moot. What has yet to be established is the long-term viability of CD-ROM as a mechanism for statewide database design. Watson states that the Illinois project was the third ever produced by Brodart, Inc. At the time of her current research, Brodart had more than 200 installations of its LePac catalog. Watson mentioned that the states of Washington, Maine, Pennsylvania, Wisconsin, and Louisiana either have already created, or are in process of creating, union catalogs on CD-ROM. Her conclusion is that most automation experts recognize that there is a place for this type of tool in online services, but that there are tradeoffs required in the provision of library services (Watson, 1989).

Summary

A number of states have developed statewide bibliographic databases or they are examining the feasibility of doing so as a part of their long-range planning. Several states, including Missouri, have led the way in using CD-ROM technology as the basis for

the way in using CD-ROM technology as the basis for statewide bibliographic databases. Released to the participants in October 1988, the Missouri Statewide Bibliographic Database produced by Brodart, Inc. using its LePac CD-ROM Public Access Catalog has been in operation for almost one year. The goals of the Missouri State Library were to assist in encouraging library automation in the state, to promote resource sharing among Missouri's libraries and to facilitate uniformity and compatibility of hardware and software in Missouri's libraries. To determine how well these goals have been accomplished, the researcher undertook to conduct an assessment.

participants in October 1988, the Missouri Statewide Bibliographic Database produced by Brodart, Inc. using its LePac CD-ROM Public Access Catalog has been in operation for almost one year. The goals of the Missouri State Library were to assist in encouraging library automation in the state, to promote resource sharing among Missouri's libraries and to facilitate uniformity and compatibility of hardware and software in Missouri's libraries. To determine how well these goals have been accomplished, the researcher undertook to conduct an assessment.

METHODOLOGY

Using a mailed questionnaire, responses were collected for evaluating the strengths and weaknesses of the Missouri Statewide Bibliographic Database. The purpose of the research was to assess the impact of MCAT upon libraries in the state of Missouri by surveying those libraries which received the Missouri Statewide Bibliographic Database upon release in October 1988.

MCAT consisted of four compact disks when originally issued. An update disk was distributed in January 1989. The disks contained a database of bibliographic records for materials owned by the libraries who were MCAT participants. The records contained complete cataloging information including Library of Congress Subject Headings. Location codes of the materials were listed at the end of each record and included the holding library's local call number, when that information was available. Location codes consisted of a four letter geographic area code and a code for the name of each participating library.

The records were grouped on each disk by date of publication, with the exception of the update disk which contained records for materials of any publication date. An interlibrary loan guidelines manual and directory of MCAT participants prepared by the Missouri State Library and the LePac Reference Manual accompanied the disks to

facilitate use of the system.

Population

Two hundred thirty-eight libraries were listed in the Missouri State Library directory as MCAT participants. Each directory listing named a contact person for the library, normally the individual who supervised interlibrary loan. That individual was most likely to be the person with the knowledge and the experience to contribute to the assessment of MCAT. Central Missouri State University was omitted from the study as was Trails Regional Library. Librarians at Trails Regional and at Central Missouri State University completed a pretest of the questionnaire in September 1989.

Instrumentation

A questionnaire was prepared by the researcher with input from personnel in the Missouri State Library, the agency sponsoring the development of the statewide database. The survey addressed the general research questions identified in Chapter 1 and further expanded in Chapter 4. The questionnaires were printed on pastel colored paper. There has been research which supports the idea that pastel colored questionnaires receive a higher response rate than those on plain white paper Borg & Gall, 1983, p.422). The survey instrument was

tested by interlibrary loan staff members of one non-participating academic library and one non-participating public library. The recipients were offered two main types of questions: those with a simple yes or no answer and others which require the selection of an answer from a list of options. Other questions were open-ended requiring a short written response concerning statistics and opinions about MCAT.

Data Collection

The questionnaires were mailed to the 236 MCAT participants on September 22, 1989. A letter explaining the nature of the questionnaire and the purpose for the research accompanied the survey. Respondents were asked to complete the questionnaire and return it no later than October 15, 1989. A follow-up letter thanking respondents for their replies and encouraging non-respondents to complete and return it was mailed on October 2, 1989.

The data collected from each respondent was analyzed and the percentage of respondents selecting each answer for every question was tabulated. Cross tabulations were made for type of library, geographic region of the library, volume of interlibrary loan conducted by the library, and other relevant variables. Results were reported to the Missouri State Library and to the library community.

ANALYSIS OF THE DATA

Population Response

Questionnaires were mailed to 236 libraries based on the mailing list which the Missouri State Library maintains of MCAT participants. A total of 166 questionnaires were returned, a 70.3% rate of return. The questionnaire was completed by personnel in at least eight different job titles. The largest number of the respondents identified themselves as Head Librarian or Director, 39.2% of the total. Interlibrary Loan Librarians completed 15.7% of the questionnaires and Reference Librarians submitted responses for 15.5%. Other personnel completing questionnaires included Assistant Librarians, Technical Services Librarians, Circulation Librarians, Library Assistants, and Library Clerks. Three respondents provided the name of the respondent rather than the title. Because some questions were not completed by all of the respondents, the analysis of each question was calculated using the total number of responses for that question. Therefore, the total number of responses will vary from question to question or from table to table.

Tables 1 and 2 indicate the total response to the questionnaire by type of library and size of library collection. Table 3 shows the total number of respondents withing the state geographic regions.

TABLE 1

Respondents to Questionnaire by Type of Library

Library	n	Percent of Type of MCAT Users
Public	85	51.2
Academic	59	35.5
School	3	1.8
Special	18	10.8
Unknown	1	.6
Total	166	100.0

The largest number of respondents were from public libraries representing 51.2% of the total. Academic libraries were second in number of responses with 35.5% of the total. Since very few school libraries are MCAT participants, it is not surprising that only 3 responses or fewer than 2% came from school libraries. Special libraries comprised the remaining 10.8% of the respondents. One respondent failed to indicate the type of library.

TABLE 2

Respondents to Questionnaire by Size of Collection

Size of Collection	n	Percent of MCAT Users
Under 25,000 volumes	41	24.7
25,001 - 50,000	40	24.1
50,001 - 100,000	33	19.9
100,001 - 250,000	26	15.7
Over 250,000 volumes	19	11.4
Unknown size	7	4.2
Total	166	100.0

Libraries with collections under 25,000 volumes accounted for almost one-fourth of the respondents. The responses from all libraries were fairly evenly distributed according to size of the collection. The least number of responses came from libraries with collections larger than 250,000 volumes. Seven responses were received which did not indicate the size of the library collection.

TABLE 3

Respondents to Questionnaire by Geographic Region

Geographic Region	n	Percent of MCAT Users
Kansas City	19	11.4
Mid-Missouri	18	10.8
Northeast	17	10.2
Northwest	16	9.6
Southeast	17	10.2
Saint Louis	45	27.1
Southwest	25	15.1
Unknown	9	5.4
Total	166	100.0

The state of Missouri was divided into seven geographic regions with the establishment of state library networks some years ago. These same geographic regions were retained for regional searching of the statewide database. Table 3 indicates that the Saint Louis geographic region led in number of returned responses to the questionnaire with a total of 45. The Southwest geographic region reported the next highest number of responses, 25. These two areas accounted for 42.2% of the responses received. Each of the five other geographic regions had almost an equal number of responses.

Non-users of MCAT

Of the total responses returned, 41 libraries

reported that they were not currently using the statewide database. These non-users of MCAT represent 24.7% of the total respondents. Tables 4, 5, and 6 show the non-users and identify them by type of library, size of library collection, and geographic region of the library.

TABLE 4

Non-users of MCAT by Type of Library

Type of Library	n	Percent of non-users
Public	6	14.6
Academic	18	43.9
School	3	4.9
Special	15	36.6
Total	41	100.0

TABLE 5

Non-users of MCAT by Size of Collection

Size of Collection	n	Percent of non-users
Under 25,000 volumes	14	34.1
25,001 - 50,000	6	14.6
50,001 - 100,000	4	9.8
100,001 - 250,000	5	12.2
Over 250,000 volumes	7	17.1
Unknown size	5	12.2
Total	41	100.0

It is evident that the majority of non-users are academic libraries, 43.9%, followed by special libraries, 36.6%. Public libraries appear to be using MCAT extensively. While six public libraries are reported as non-users, this represents only 7.0% of the 85 total public libraries who responded to the questionnaire. Among special libraries, 15 of a total of 18, or 83.3% of the questionnaires returned from special libraries, are non-users of MCAT.

TABLE 6

Non-users of MCAT by Geographic Region

Geographic Region	n	Percent of non-users
Kansas City	6	14.6
Mid-Missouri	3	7.3
Northeast	1	2.4
Northwest	3	7.3
Southeast	5	12.2
Saint Louis	14	34.2
Southeast	5	12.2
Unknown	4	9.8
Total	41	100.0

More than one-third of the non-user responses were from libraries with collections under 25,000 volumes. The remaining two-thirds distribution of non-users was evenly spread among the various sized library collections.

Because the majority of responses came from the Saint Louis geographic region, it is not surprising that more of the non-users were in the same geographic region. More than one-third of the non-users checked the Saint Louis geographic region. This figure (14 responses) was a little less than one-third of the total responses from the Saint Louis region. Non-users were asked to give the reason or reasons for not using the statewide database. Of those 41 non- users, 33 (just over 80%) indicated a reason for non-use. Only seven different answers were reported by the 33 who replied to the question. Table 7

indicates the distribution of the seven reasons given for not using MCAT.

TABLE 7

Reasons for Not Using MCAT

Reasons	n	Percent of Respondents
Wrong CD-ROM player	1	3.0
Use OCLC instead	7	21.2
Do not have hardware	17	51.5
No CD-ROM player	6	18.2
Do not need	1	3.0
Too cumbersome	1	3.0
Total	33	99.9

It is significant that the number one reason for non-use of MCAT was that the library did not have the required hardware to make use of the system. The reason receiving the next highest response was that the library did not have a CD-ROM player, also a hardware item needed. One respondent cited that the library had the wrong CD-ROM player, a Phillips, rather than a Hitachi. Thus, of the 33 responses, 24 of the reasons for not using MCAT were actually hardware related. Obviously, the statewide database is of no use to those libraries which do not have the equipment necessary to operate it.

Use of MCAT

Question 5 of the survey asked the respondents to

check all of the various ways in which they were using the statewide database. Five choices were given and a sixth was open-ended so that the respondent could enter any other use for the database. Table 8 illustrates the responses.

As one would expect of a statewide database designed to encourage resource sharing, the primary use of MCAT is for interlibrary loan usage. Nearly 90% of those using the database in some way are using it for interlibrary loan purposes. More than 40% of the users verify cataloging or acquisitions data with MCAT. Just over 15% of the users view the database as an aid to collection development. Three "other" uses were mentioned by more than one of the 13 respondents listing an "other" use. They were 1) to identify materials with partial information, i.e. a portion of the author's name or title, 2) to advise the reader regarding possible selections of materials, i.e. subject searching, and 3) to locate materials within a nearby radius so that the library patron could go there for the material rather than borrow it on interlibrary loan.

Table 8

Uses of MCAT by 125 Respondents

Use	n	Percent
Interlibrary loan	112	89.6
Public access catalog	8	6.4
Back-up catalog	16	12.8
Cataloging/Acquisitions Verification	52	41.6
Collection Development	21	16.8
Other uses	13	10.4

Question 13 of the survey asked if MCAT was used by library patrons. All 125 MCAT users replied to this question. Of that total, only 7 reported that MCAT was being used by patrons. These seven libraries represented 5.6% of the total users. Questions 6 and 7 of the questionnaire dealt with theamount of time spent daily using the MCAT disks and ALANET, the communications network being funded by the Missouri State Library. The following two tables indicate the daily usage in minutes.

Table 9

Average Daily Use of MCAT in Minutes

Minutes	n	Percent of Respondents
Less than 5 minutes	4	3.9
5 minutes	8	7.8
10 minutes	15	14.7
15 minutes	14	13.7
20 minutes	8	7.8
30 minutes	22	21.6
45 minutes	3	3.0
60 minutes	19	18.6
Over 1 hour daily	9	8.8
Total	102	100.0

The least amount of time reported was two hours per semester, not daily. Two users indicated that the database was being used for six hours daily. In each case, the user explained that the database was being used to assist in collection development activities. The bulk of the users appear to use MCAT from 10 minutes to one-half hour daily.

Table 10

Average Daily Use of ALANET in Minutes

Minutes	n	Percent of Respondents
Less than 5 minutes	3	3.8
5 minutes	14	17.9
10 minutes	17	21.8
15 minutes	16	20.5
20 minutes	9	11.5
25 minutes	1	1.2
30 minutes	14	17.9
45 minutes	1	1.2
60 or more daily	3	3.8
Total	78	100.0

Significantly fewer libraries use ALANET compared to those who use MCAT. Only 78 out of 125 MCAT users reported that they are also using ALANET. The average daily time spent using ALANET is shown to be between 10 and 15 minutes.

Table 11

Type of Staff Using MCAT

Staff	n	Percent of Respondents
Interlibrary Loan	91	74.6
Reference	43	35.2
Technical Services	25	20.5
Library Director	57	46.7
Other staff	17	10.2

Note: Total Responses = 122

Table 11 profiles the personnel members who use MCAT and ALANET. It was to be expected that from a database designed to facilitate interlibrary loan that the type of personnel who were most frequently reported as users were members of the interlibrary loan staff. This is followed by library directors and reference personnel. Among other personnel who were listed as using the database were materials selectors, the assistant librarian, LSCA grant staff, library technicians and assistants, and the library secretary.

MCAT participants had the opportunity to attend a one-day training session on the use of the statewide database at the time of its release in the fall of 1988. The sessions were held at various locations throughout the state so that a session would be a short drive making it feasible to hold each session during one work day. Questions 15 and 16 queried the recipients regarding their attendance at one of the training sessions and the adequacy of the session for meeting their training needs.

A total of 100 of the 125 users indicated that someone from their library had attended one of the training sessions. Eighty percent (80 respondents) agreed that the session had been adequate. Only 20 of the 100 replies indicated that more training was necessary to make use of the database.

Communications Methods

The recipients of the questionnaire were asked questions with a yes or no response regarding the microcomputer hardware and CD-ROM products used by the library. Table 12 shows the number and percent of user responses to these questions. At the time of the survey, almost 75% of the libraries responding had other CD-ROM products in the library. Nearly 40% of the libraries using MCAT used a microcomputer solely to run MCAT. Nearly 80% of the users own a modem with which they could access ALANET for transmitting and receiving interlibrary loan requests. Of these users, a total of 99 had a modem, and 78 or 78.8% were using the modem to access ALANET. Table 13 illustrates how the ALANET users rate it as a communications tool. Two ALANET users did not assign a rating.

TABLE 12
Hardware Configuration of MCAT

Configuration	n	Percent of MCAT Users
MCAT is the only CD-ROM in library	33	26.4
MCAT runs on dedicated microcomputer	48	38.4
Library has a modem	99	79.2

Note: Total responses = 125

Exactly 50% of the respondents who answered Question 28 considered it to be an Average or Above Average communications system. Almost 30% viewed it as Below Average or Poor, and just over 20% rated it as Average.

Question 34 of the survey asked what methods were used to transmit interlibrary loan requests prior to use of MCAT. These methods are shown in Table 14.

TABLE 13
ALANET as Method of Transmitting/Receiving Interlibrary Loan Requests

Rating	n	Percent of Respondents
Excellent	12	15.8
Above Average	26	34.2
Average	16	21.1
Below Average	9	11.8
Poor	13	17.1
Total	76	100.0

TABLE 14

Methods Used to Transmit Interlibrary Loan Requests Prior to Use of MCAT

Method	n	Percent of MCAT Users
OCLC requests	40	35.1
Mail requests	80	70.2
Network participation	71	62.3
Telephone	36	31.6
Other	9	7.9

Note: Total Responses = 125

Respondents were permitted to identify all the different methods for interlibrary loan requests used prior to MCAT. Responses from 114 users showed that mail requests were most common, with the use of the state network system following closely behind. The interlibrary loan module of the Online Catalog Library Center (OCLC) in Dublin, Ohio, was used by 35.1% of respondents. Cross tabulations of the OCLC users by type of library showed that 16 or 40% of the OCLC users were public libraries and 22 or 55% were academic libraries. OCLC for interlibrary loan was used in only five of the special libraries and in none of the school libraries that responded. Approximately one-fourth of the respondents commented that OCLC continued to be used

extensively for interlibrary loan. Other methods of interlibrary loan that were mentioned included telefacsimile, access to a local library database, participating in a municipal library cooperative, and borrowing directly from local libraries.

Hardware/Software/Documentation Features

Question 14 asked how many users had experienced hardware problems in using MCAT. Responses were received from 122 users and only 10 of these had experienced any difficulty with hardware. This indicates that the hardware has been relatively trouble free.

TABLE 15
Browse Search Mode as Rated by MCAT Users

Rating	n	Percent of Respondents
Excellent	38	33.9
Above Average	34	30.3
Average	31	27.7
Below Average	7	6.3
Poor	2	1.8
Total	112	100.0

TABLE 16

Express Search Mode as Rated by MCAT Users

Rating	n	Percent of Respondents
Excellent	23	21.3
Above Average	35	32.4
Average	31	28.7
Below Average	14	13.0
Poor	5	4.6
Total	108	100.0

MCAT uses the standard online catalog searching protocols developed for the CD-PAC marketed as LePac by Brodart, Inc. Questions 17 and 18 of the survey asked the MCAT users to rate the two methods of searching available in the database. Tables 15 and 16 relate the responses of the users who rated the search modes -- 112 and 108 users respectively.

Browse searching allows a single search by author, title, or subject much like card catalog searching. The Browse search mode is the most popular with MCAT users with 64.2% rating it as Above Average. Fewer than 10% of the 112 respondents to the question rated Browse searching as Below Average. The Express mode is a somewhat more sophisticated method of searching. It permits the user to search multiple fields

simultaneously. In the Express mode, keyword searching is available using the "Anyword" field and both Boolean logic and truncated searches may be performed. Because the user may search in the Express Mode and yet never utilize these specialized search strategies, questions 19, 20 and 21 addressed each of these features separately.

The Express mode was assessed as Above Average or better by over half of those answering question 18. It should be noted that some respondents mentioned searching difficulties when using the Express mode. These comments These comments may be found in Appendix C.

TABLE 17

Boolean Searching as Rated by MCAT Users

Rating	n	Percent of Respondents
Excellent	7	8.3
Above Average	18	21.4
Average	41	48.8
Below Average	15	17.9
Poor	3	3.6
Total	84	100.0

As stated previously, Boolean searching is performed

on MCAT using the Express Mode. A string of search terms in a search field assumes the "and" logic should be applied. Terms inserted within parenthesis marks are searched with "or" logic. Terms entered with a tilde (~) between words are searched with "not" logic. Question 19 asked the users to rate the Boolean search capability of MCAT. Only 84 users responded to this question. The significant difference in the lower response rate on Boolean searching suggests that a substantial number of MCAT users may be unfamiliar with Boolean search logic and therefore, do no use this search strategy. One comment by a user that is listed in Appendix C, Improvements Needed, of this paper asked that the Missouri State Library conduct training sessions in online searching so that users can use the system's capabilities to the maximum.

Almost 30% of 84 users rated the Boolean searching as Above Average or Excellent. Just over 20% assigned a rating of Below Average or Poor. The remaining 50% of the respondents assessed the Boolean method as Average.

TABLE 18

"Anyword" Searching as Rated by MCAT Users

Rating	n	Percent of Respondents
Excellent	8	7.5
Above Average	35	33.0
Average	44	41.5
Below Average	15	14.2
Poor	4	3.8
Total	106	100.0

Question 20 required the respondent to assess the "Anyword" search, the keyword means of searching in MCAT. While a similar number of respondents replied to the question, the capability received substantially fewer Excellent ratings than did either the Browse or Express modes. Only 7.5% of the respondents considered it to be an Excellent feature of the database. Approximately one-third of the users considered this method to be Above Average, however. Fewer than 5% graded "Anyword" searching as Poor.

TABLE 19

Truncated Searching as Rated by MCAT Users

Rating	n	Percent of Respondents
Excellent		3.5
Above Average	25	29.4
Average	42	49.4
Below Average	11	13.0
Poor		4.7
Total	85	100.0

Truncated searching in the Express Search mode requires the user to insert an asterisk (*) to the right of a minimum of the first three letters of a search term. All terms with the corresponding first three letters will be retrieved. To perform an embedded character truncated search, the question mark (?) is inserted within a search term. A question mark may be inserted for each unknown letter of the term. For example, the search for wom?n will locate both woman and women.

The method for performing truncated searches in MCAT was assessed in Question 21 of the survey. Results are shown in Table 19. Only 85 of the total users responding to the survey evaluated the use of truncated searching. This suggests, as in Boolean searching, that a number of MCAT users are unfamiliar with truncated search

strategies and have not utilized the LePac Reference Manual for self-teaching of these capabilities of the system.

Nearly 50% of those rating the truncated search feature regarded it as Average. Another 32% rated it Above Average or Excellent. Because almost one-third of the users failed to answer the questions on both Boolean and truncated searching, it may be deduced that these are areas requiring additional instruction to the user so that the search capabilities of MCAT are used to the maximum advantage.

CD-ROM searching, while much faster than manual methods, is considerably slower than on-line searching of databases stored on computer tapes or disks. Question 22, concerning the response time, was asked to determine if users were impatient with the amount of time required to perform a search on MCAT. The responses to this question appear in Table 20.

TABLE 20

Rating of MCAT Searching Response Time

Rating	n	Percent of Respondents
Excellent	10	9.1
Above Average	38	34.5
Average	41	37.3
Below Average	11	10.0
Poor	10	9.1
Total	110	100.0

The response time of the system evoked an attitude of approval from the users. An Average rating was assigned by 41 users which accounted for 37.3% of the total responses. An almost equal number of users, 38, assessed the response time as Above Average. Excellent and Poor ratings were assigned by each of 10 respondents.

A group of questions on the survey were related to the user's perception of the quality of the Brodart, Inc. product in a more generic sense. Tables 20 through 24 present the users' ratings of the LePac on-screen directions, the readability of the screens, the general ease of searching the CD-ROM product, the procedure for changing disks, and the printed LePac Reference Manual compiled by Brodart, Inc. The response rate for this group of questions ranged from 113 to 117 of the 125 MCAT

users. The features of LePac as designed by Brodart received generally favorable reviews.

TABLE 21

Clarity of On-screen Directions

Rating	n	Percent of Respondents
Excellent	30	25.9
Above Average	52	44.8
Average	28	24.1
Below Average	5	4.3
Poor	1	.9
Total	116	100.00

Over 70% of the respondents rated the clarity of the on-screen directions of the product as Above Average or Excellent. Slightly more than 5% judged this feature to be Below Average or Poor.

MCAT users considered the readability of the screens to be quite good. Almost 80% of those who rated this feature evaluated the readability of the screens at Above Average or Excellent. There was only one response for Below Average and none for Poor. Overwhelmingly, the users were in agreement that the design and text of the search screens were of high quality.

TABLE 22

Readability of Screens

Rating	n	Percent of Respondents
Excellent	34	29.1
Above Average	58	49.6
Average	24	20.5
Below Average	1	.8
Poor	0	0
Total	117	100.00

The assessment of the overall ease of searching the MCAT database received ratings of Excellent by 16.4% of those replying. An Above Average rating was assigned by 44.8% of the total answering the question. With less than 10% signifying that the system was not easy to search, the LePac system was generally accepted as a product that could be used by most staff members.

TABLE 23

General Ease of Searching

Rating	n	Percent of Respondents
Excellent	19	16.4
Above Average	52	44.8
Average	34	29.3
Below Average	7	6.0
Poor	4	3.4
Total	116	100.00

TABLE 24

Disk Changing Procedure

Rating	n	Percent of Respondents
Excellent	12	10.4
Above Average	24	20.6
Average	30	25.9
Below Average	29	25.0
Poor	21	18.1
Total	116	100.00

The major drawback of the system in the view of the users was the procedure necessary in order to change from one disk to another. Appendix E lists comments which cite this as a feature most in need of improvement. The

product was judged as Below Average or Poor by 25.0% and 18.1% of the respondents respectively.

TABLE 25

Brodart Inc., LePac Reference Manual

Rating	n	Percent of Respondents
Excellent	14	12.4
Above Average	44	38.9
Average	47	41.6
Below Average	6	5.3
Poor	2	1.8
Total	113	100.00

The manual which Brodart, Inc. supplied with each purchase of the system was assessed as Excellent by 14 and as Above Average by 44 of 113 respondents. A Below Average or Poor rating was indicated in only 8 of the 113 responses.

Impact of MCAT on Resource Sharing

Of the 125 MCAT users who responded to the questionnaire, 106 answered Question 29 requesting a rating of the effect that MCAT has had on incoming interlibrary loan requests. Table 26 shows that nearly one-half of MCAT users increased the number of interlibrary loan requests from other libraries. Approximately 18% showed a decrease in this activity.

Only 108 MCAT users responded to Question 30 about outgoing interlibrary loan activities. Table 27 indicates an increased number of outgoing interlibrary loan requests for 37% of the respondents. Nearly half of the users indicated that outgoing requests had no change.

TABLE 26

Effect of MCAT on Incoming Interlibrary Loan Requests

Effect	n	Percent of MCAT Users
Increased Greatly	16	15.1
Increased Somewhat	30	28.3
Remained the Same	41	38.7
Decreased Somewhat	9	8.5
Decreased Greatly	10	9.4
Total	106	100.0

TABLE 27

Effect of MCAT on Outgoing Interlibrary Loan Requests

Effect	n	Percent of MCAT Users
Increased Greatly	14	12.96
Increased Somewhat	26	24.1
Remained the Same	50	46.3
Decreased Somewhat	14	12.96
Decreased Greatly	4	3.7
Total	108	100.0

Tables 28 and 29 illustrate the effect that MCAT has had on fill rates and blind search requests. The fill rate of interlibrary loan requests has increased somewhat for more than 30% of those MCAT users responding to Question 31. Nearly one-half of the MCAT users reported that the fill rate had remained the same. Only 12% indicated a reduction in the fill rate.

With regard to the number of blind search requests received, Question 32, more than 50% related that these searches showed no increase or decrease. Approximately one-third of the respondents stated that blind search requests had been reduced since implementing MCAT.

TABLE 28

Effect of MCAT on Fill Rate of Interlibrary Loan Requests

MCAT Users	n	Percent of Effect
Increased Greatly	13	12.1
Increased Somewhat	33	30.8
Remained the Same	48	44.9
Decreased Somewhat	9	8.4
Decreased Greatly	4	3.7
Total	107	100.0

TABLE 29

Effect of MCAT on Blind Search Interlibrary Loan Requests

Effect	n	Percent of MCAT Users
Increased Greatly	4	4.5
Increased Somewhat	6	6.8
Remained the Same	48	53.9
Decreased Somewhat	10	11.2
Decreased Greatly	21	23.6
Total	89	100.0

Question 33 asked for the approximate percentage of interlibrary loan requests that were being verified using MCAT. Table 30 presents the results.

It appears that the users of the Missouri Statewide Bibliographic Database are successful in verifying most of their interlibrary loan requests with a search in the database. Over 40% of 107 responses reported that the success rate of verification was between 76 and 100%. Approximately one-fourth of the responses indicated a low verification percentage.

TABLE 30

Percentage of Interlibrary Loan Requests Verified Using MCAT

Percentage	n	Percent of MCAT Users
0 - 25%	27	25.2
26 - 50%	10	9.4
51 - 75%	26	24.3
76 - 100%	44	41.3
Total	107	100.0

To determine what effect, if any, MCAT has had on the volume of interlibrary loan requests, the respondents were asked to provide statistics regarding average monthly incoming and outgoing interlibrary loan requests before and after implementing MCAT. Tables 31 and 32 illustrate the findingss.

In each instance there was a wide variation between the highest and lowest average monthly incoming and outgoing interlibrary loan requests reported. The average number of incoming requests for all libraries was approximately 5 fewer with MCAT use than prior to use of MCAT. A similar result occurred with outgoing requests. The difference between the monthly average, since the implementation of MCAT and prior to its use, was an

increase of 2.1 requests. Some MCAT users have a tremendous volume of interlibrary loan and others have almost none. However, the use of MCAT has not significantly decreased nor increased that volume. A number of respondents commented that this was indeed the case. Information was also solicited regarding the average monthly number of incoming and outgoing ALANET transactions. Again the results show that some libraries are using ALANET extensively, while others are using it very little. Table 33 illustrates the reported average use.

Table 31

Number of Monthly Incoming Interlibrary Loan Requests Before and After Implementing MCAT

Requests	High	Low	Average
*Before	600	1	49.3
**After	390	1	44.7
*Total responding = 69			
**Total responding = 73			

Table 32

Number of Monthly Outgoing Interlibrary Loan Requests Before and After Implementing MCAT

Requests	High	Low	Average
*Before	650	1	40.7
**After	530	1	42.8

*Total responding = 77

**Total responding = 86

Table 33

Number of Average Monthly Incoming and Outgoing ALANET Transactions

Transactions	High	Low	Average
*Incoming	205	2	39.0
*Outgoing	100	1	23.7

*Total responding = 52

ALANET was not receiving heavy use from the users at the time of the survey. The monthly average for incoming ALANET requests was 39. Outgoing ALANET requests were fewer in number, averaging 23.7%.

The last two questions on the questionnaire gave

respondents the opportunity to list any MCAT feature they found especially helpful or in need of improvement. Because this was the first opportunity that users had to express their opinions regarding MCAT, the researcher was keenly interested in their very candid remarks. Appendix D contains the full text of the comments on helpful features of those submitted by 68 MCAT users. Appendix E records the 81 comments regarding needed improvements.

The ability to perform subject searches is one helpful feature that a number of respondents mentioned in a comment. This seems to aid the librarian in quickly determining titles to assist a researcher that may be in a library's local collection. Both the BROWSE and the EXPRESS modes of searching were cited several times as helpful features.

MCAT users seemed to especially appreciate the availability of holdings information in MCAT, although a number of respondents criticized the format of the entry in the interlibrary loan directory provided by the Missouri State Library when MCAT was distributed. In the directory the library is listed by name of the library and on MCAT the library is noted according to the name of the institution.

One user noted that correct spelling was not necessary in the BROWSE mode. In general, the searching capabilities of the system received favorable comments

from the majority of the 68 users who listed favorable comments.

Many users mentioned that searching multiple disks was problematic. The growing number of disks was perceived to be very cumbersome. The need to first know the date of publication before searching appeared to many to be a feature that caused difficulty. A partial solution to this problem was suggested by several respondents. They asked that one index be compiled and updated on the final disk for the whole database. This master index would direct the user to the appropriate disk bearing the bibliographic record desired.

A common complaint was the lack of a smooth exit from the system back to the DOS prompt or to a main menu on the microcomputer. At least seven responses mentioned this problem.

The mechanics for disk switching was mentioned as a needed improvement. The fact that each disk has a separate index that must be loaded caused the user to have to re-enter a search for every disk searched.

Poor quality of the information in the bibliographic records was mentioned more than once. Multiple records for the same work was another data problem cited. Although the last two questions specifically asked about features of the MCAT database, a number of respondents commented on the communications network, ALANET. A

suggestion from several users was to have automatic forwarding of a search request to another library if the request went unanswered for a period of time. Various users had other compliments and criticisms of the system.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents a summary of the major findings, implications and conclusions of this study, along with suggestions for further research considerations. As previously pointed out in Chapter 2, relatively little published information exists concerning the implementation of statewide bibliographic databases on CD-ROM. While a review of the literature indicated that the possibilities for developing statewide databases are under consideration in various states across the nation, Missouri has been among the pioneers to actually implement this kind of tool.

Two previous experiments, which included an attempt to assess the product, have been conducted that shed some light regarding the feasibility of statewide databases on CD-ROM. In Illinois the CD-ROM database was critiqued by a random sample of patrons, by members of a University of Illinois Library and Information Science class, and by the library staff at four participating libraries (Watson, 1987). Epler and Cassell (1987) indicated that interlibrary loan transactions in Pennsylvania increased by an average of 68% in the first year after the introduction of ACCESS Pennsylvania. Because many of the libraries in Pennsylvania were using the database as a public access catalog, a 300-500% increase in circulation was also reported. Among academic libraries, the

database was viewed as an important public relations and outreach service.

Use of MCAT by Libraries in Missouri

It is evident that the Missouri Statewide Bibliographic Database (MCAT) is being used by libraries in Missouri. The extent of that use varies depending upon a number of factors. Both size and type of library appeared to have a bearing on the degree to which MCAT is being used. Smaller libraries which did not have a wealth of other resources such as affiliation with a bibliographic utility for cataloging and/or interlibrary loan welcomed MCAT as a much needed tool for providing service to their patrons. Public libraries, especially those which received all the necessary equipment for implementing MCAT via the Missouri State Library, comprise the majority of users.

Few school libraries have their bibliographic records available in machine-readable form. Therefore, there were only three school libraries which responded to the questionnaire. None of these were using the system. The majority of non-users were academic libraries, accounting for 43.9% of the non-users responding. However, of the total number of special libraries responding to the questionnaire, 83.3% were non-users. The number one reason given for non-use was the lack of the appropriate equipment to use the system. Non-users

responding to the questionnaire were from all areas of the state, but the largest proportion were from the Saint Louis Geographic Region. More responses overall were received from the Saint Louis area.

Variety of Uses of MCAT

As anticipated by the researcher, the primary use of the system is for resource sharing, interlibrary loan. Almost 90% of all respondents were using MCAT for interlibrary loan. The second major use of the system was as a cataloging and/or acquisitions verification tool. More than 40% of the respondents were using the system for this purpose. Approximately 17% of the users reported that MCAT is being used as an aid to collection development. Other innovative uses of the system mentioned were for identifying materials when the requester had only partial or imperfect bibliographic information and as a reader's advisory tool for patrons asking for materials on particular subjects.

The majority of the users appear to use the system between 10 minutes and one-half hour daily.

Communications Methods

Those who use ALANET for communications were spending 10 to 15 minutes daily in connect time. These users comprised 79.2% of the total users who responded. One-half of the ALANET users considered ALANET to be an Excellent or Above Average means of transmitting and

receiving interlibrary loan requests. Approximately 35% of the ALANET users were also OCLC users. Based upon the user comments, it may be interpreted that OCLC users have been less satisfied with using MCAT and ALANET than were those respondents who had been relying on non-electronic methods of interlibrary loan request verification and transactions.

Opinions on the Standard Features of the System

Over one-half of the MCAT users rating the two modes of searching assessed both the BROWSE and the EXPRESS mode at Excellent or Above Average. The BROWSE mode was rated Excellent by 38 users and the EXPRESS mode was similarly rated by 23 users. The keyword or "Anyword" search available in EXPRESS mode received only 8 Excellent ratings from the users. In like manner there were only four respondents who assessed this search method as Poor. Since the majority of interlibrary loan searches are for "known" items, it is possible that keyword searching is not necessary for this use of MCAT. As libraries begin to use the system more extensively for other purposes, the keyword search may be accorded a higher rating.

Substantially fewer of the users responding to the questionnaire had used the Boolean or truncated searching features of the EXPRESS mode. Instructions for use of these features are outlined in the LePac Reference Manual

supplied with the system, but users must take the time to familiarize themselves with the correct structuring of the commands to perform successful searches. Because these methods require more detailed knowledge of commands in the system, it is here that additional training of users may be in order.

Users of MCAT reacted favorably to the screen design of the system. While not being overly generous with Excellent ratings, a clear majority of users agreed that the clarity of on-screen directions, the readability of the screens, and the general ease in using the system were Above Average. Only one respondent regarded the on-screen directions as Poor. Four users were dissatisfied with the overall use of the system. The researcher concluded that users were very positive in their assessment of the mechanics of using the system. The only feature that was perceived as less than average by more than 50% of the users was the procedure necessary in order to change disks. While it is possible to chain a maximum of four compact disk players to one microcomputer so that four disks can be searched simultaneously, it is likely that few of the respondents had sufficient resources to do this at the time of the survey. A problem would still ensue with the fifth supplemental disk that is necessary to contain all the records on MCAT. The reaction to MCAT might have been more positive

if all users had the equipment required to search four compact disks at one time.

Effect of MCAT on Resource Sharing To date the effect of MCAT on resource sharing in Missouri has not been dramatic. While some libraries reported that both incoming and outgoing interlibrary loan requests had increased greatly, the overall picture indicated that in approximately 40 to 45% of the libraries, interlibrary loan had remained about the same as it was before the release of MCAT. Fewer than 20% of the respondents reported a decrease in activity since the implementation of MCAT.

The figures reported by respondents on the average monthly incoming and outgoing interlibrary loan request before and after the implementation of MCAT did not contradict the responses of users about the effect of MCAT on interlibrary loan requests. A wide variation existed between the highest monthly average reported and the lowest. However, when the average was calculated for all respondents before and after the use of MCAT, the average monthly incoming requests were down by approximately five and the average monthly outgoing requests showed an increase of two. Based on all the responses regarding the effect MCAT has had on interlibrary loan, the researcher concludes that MCAT has

not had a significant adverse effect on interlibrary loan in Missouri.

Strengths and Weaknesses of MCAT

Users of the system agreed overwhelmingly that MCAT is easy to use. The term "user friendly" might well be applied to MCAT. The BROWSE and the EXPRESS modes of searching were strong points of the system. Particularly useful was the ability to perform subject searches and to be able to successfully search for records when the searcher had only partial bibliographic information.

Simply being a tool that provides holdings information is a strength of MCAT. While few would argue that the system could not be improved, the respondents communicated their approval that MCAT exists and can provide the basis for continued growth of resource sharing in the state.

A basic weakness of MCAT was the number of disks in the system and the procedures necessary to do a thorough search of the entire database. The organization of the entries by date of publication was perceived as another weakness by respondents.

Users would prefer a smoother exit from the system which does not necessitate rebooting of the microcomputer to return to a main menu or a DOS prompt. They also would like to have one main index to the entire database, rather than having each disk indexed separately. Users

would prefer a communications network that is linked to the database directly so that information does not have to be rekeyed.

A database is only as good as the information it contains; therefore, users want a "clean" database without duplicate records and poor quality cataloging. The fact that detected errors and records for withdrawn materials cannot yet be corrected or deleted was perceived as a major weakness of the system.

Recommendations for Further Study

It would be wise to compare the user reaction to MCAT to that of other states which have statewide databases on CD-ROM. Useful features of other products could be incorporated into future versions of MCAT. Further research on the development of the ACCESS Pennsylvania database, in particular, might aid in the inclusion of more school libraries in to the Missouri Statewide Bibliographic Database or indicate how the state of Missouri might best go about tapping the resources of our school libraries and promoting resource sharing among them.

Finally, a statewide bibliographic database on CD-ROM is new to Missouri and to the entire library community nationwide. The Missouri Statewide Bibliographic Database should undergo continuing assessment as it is modified and improved. A study

similar to this one should be conducted again within a year or two.

REFERENCES

Andre, P. Q. J. (1989). Optical disc applications in libraries. Library Trends, 37, 326-342.

Autographics produces first edition of Maine CDROM catalog. (1989). Advanced Technology Libraries, 18(4), 4.

Becker, J., & Hayes, R. M. (1979). A Statewide data base of bibliographic records for Missouri libraries. Los Angeles: Becker and Hayes.

Bills, L. G., & Helgerson, L. W. (1988). CD-ROM public access catalogs: Database creation and maintenance. Library Hi Tech, 6(1), 67-86.

Bocher, R. (1984) MITINET/retro in Wisconsin libraries. Information Techonolgy and Libraries, 3, 267-292.

Borg, W. E., & Gall, M. D. (1983). Educational research: An introduction (4th ed). New York: Longman.

Cassell, R.E. (1987). Pennsylvania's CD-ROM statewide union catalog. In N. M. Nelson (Ed.), SCIL: The second annual software/computer/database conference and exposition for libraries and information managers conference proceedings (pp. 34-35). Westport, CT: Meckler.

Davis, W. P. (1987). Missouri libraries move into CD-ROM world. Show-Me Libraries, 39(3), 4-6.

Epler, D. M. (1988). Networking in Pennsylvania: Technology and the school library media center. Library Trends, 37(2), 43-55.

Epler, D., & Cassel, R. E. (1987). Access Pnnsylvania: A CD-ROM database project. Library Hi Tech, 5(3), 81-92.

Gatcheff, V. (1987). LePac technologies tie the keystone state together. Library Trends, 37, 89-92.

Glazer, F. J. (1985). That Bibliographic highway in the sky. Library Journal, 110(2), 64-67.

Logsdon, L. (1988). Brodart named vendor for state-wide database. Show-Me Libraries, 39(5), 4-5.

Maine approves statewide catalog. (1987). Wilson Library Bulletin, 62(1), 10.

MaineCat bill passes. (1987) Library Journal, 112(2), 20.

MaineCat fact sheet. (1987). In N. M. Nelson (Ed.), SCIL: The second annual software/computer/ database conference and exposition for libraries and information managers conference proceedings (pp. 16-17). Wesport, CT: Meckler.

Missouri libraries outfitted with CD-ROM. (1987). Wilson Library Bulletin, 62(3), 15.

Moore, B. (1987). An Introduction to CD-ROM technology. Show-Me Libraries, 38(11), 12-14.

Nevada installs CD-ROM catalog (1988). Wilson Library Bulletin, 62(3), 14.

New Jersey Computer Applications Task Force. (1980). A report of the Computer Application Task Force. Trenton, NJ: New Jersey State Library. (ERIC Document Reproduction Service No. ED 234 766)

New York State Library. (1987). Libraries & technology: A strategic plan for library resource sharing in New York. Albany, NY: New York State Library. (ERIC Document Reproduction Service No. ED 286 523)

Palmour, V. E., & DeWath, N. V. (1980). Missouri statewide bibliographic data base survey. Rockville, MD: King Research, Inc. (ERIC Document Reproduction Service No. 195 228)

Watson, P. D. (1989). University of Illinois library catalog in CD-ROM: Impact on resource sharing and reference work. In Clinic on library applications of data processing (24th: 1987 University of Illinois at Urbana-Champaign). (pp. 153-176). Urbana-Champaign: University of Illinois Urbana-Champaign, Graduate School of Library and Information Science.

Watson, P. D. (1987). CDROM catalogs -- Evaluating LePac and looking ahead. Online, 11(5), 74-80.

Watson, P. D., & Golden, G. A. (1987). Distributing an online catalog on CD-ROM -- The University of Illinois experience. Online, 11(2), 65-74.

Wisconsin Council on Library and Network Development. (1987). Automating Wisconsin Libraries (Bulletin

No. 8100). Madison, WI: Wisconsin State Department of Public Instruction, Division of Library Services. (ERIC Document Reproduction Service No. ED 922 479). WLN releases LaserCat. (1987). Wilson Library Bulletin, 61(9), 10.

APPENDICES

APPENDIX A

MCAT, the Missouri Statewide Bibliographic Database Assessment Questionnaire

Please respond to the following questions about the library in which you work and the use of the Missouri Statewide Bibliographic Database. Check or circle the appropriate reply.

1. Title of person completing the questionnaire.

_____

2. Type of library:

a.____ Public b.____ Academic c.____ School d.____ Special

3. Geographic region of library:

a.____ KCGR b.____ MMGR c.____ NEGR d.____ NWGR

e.____ SEGR f.____ SLGR g.____ SWGR

4. Size of library book collection:

a._____ Under 25,000 volumes

b._____ 25,001 - 50,000

c._____ 50,001 - 100,000

d._____ 100,001 - 250,000

e._____ Over 250,000

5. MCAT is used for : (Check all that apply).

a._____ Interlibrary loan

b._____ Public access catalog

c._____ Back-up catalog for local system

d._____ Cataloging/Acquisitions verification tool

e._____ Collection development aid

f._____ Other (Please specify). _____

6. Amount of time spent daily using MCAT discs:

_____(minutes or hours)

7. Amount of time spent daily using ALANET:

_____(minutes or hours)

8. Library personnel who use MCAT:

a._____ Interlibrary loan staff

b._____ Reference staff

c._____ Technical Services staff

d._____ Library Director

e._____ Other (Please specify) _____

9. MCAT is the only CD-ROM product in the library.
1. YES 2. NO

10. MCAT is loaded on a microcomputer dedicated to its use.
1. YES 2. NO

11. The library has a modem allowing use of ALANET for interlibrary loan transactions.
1. YES 2. NO

12. If the answer to #11 is yes, does the library make use of ALANET for transmitting and receiving interlibrary loan requests?
1. YES 2. NO

13. Do library patrons use MCAT?
1. YES 2. NO

14. Has hardware (equipment failure) been a problem in using MCAT?
1. YES 2. NO

15. Did you participate in the MCAT training session sponsored by the Missouri State Library?
1. YES 2. NO

16. If yes, was the training session adequate for efficient use of MCAT?
1. YES 2. NO

On a scale of 1 to 5, rate the relative importance/quality/usefulness of:

		EXCELLENT (1)		AVERAGE (3)		POOR (5)
17.	Browse mode of searching	1	2	3	4	5
18.	Express mode of searching	1	2	3	4	5
19.	Boolean searching	1	2	3	4	5
20.	"Anyword"searching	1	2	3	4	5
21.	Truncated searching	1	2	3	4	5
22.	Response time	1	2	3	4	5
23.	Clarity of on-screen directions	1	2	3	4	5
24.	Information in the LePac Reference Manual	1	2	3	4	5
25.	Readability of the MCAT user screens	1	2	3	4	5
26.	General ease of searching	1	2	3	4	5
27.	Procedure for changing discs	1	2	3	4	5
28.	ALANET as a method of transmitting/receiving interlibrary loan requests	1	2	3	4	5

		INCREASED GREATLY (1)		REMAINED SAME (3)		DECREASED GREATLY (5)
29.	Since the implementation of MCAT, incoming interlibrary loan requests have	1	2	3	4	5
30.	Outgoing interlibrary loan requests have	1	2	3	4	5

	INCREASED GREATLY (1)		REMAINED SAME (3)		DECREASED GREATLY (5)
31. The fill rate (the percentage of inter-library loan requests successfully completed) since the implementation of MCAT has	1	2	3	4	5
32. The number of blind search requests received (excluding any agreements the library has with other libraries to accept blind searches) has	1	2	3	4	5

33. The approximate percentage of ILL requests verified via MCAT is 0-25% 26-50% 51-75% 76-100%

34. The method(s) used to transmit interlibrary loan requests prior to MCAT was (Check all that apply)

a.___ OCLC b.___ Mail c.___ Network d.___ Phone e.___ Other

(Please explain other.)

Please answer the following statistical questions to the best of your ability. The quarterly interlibrary loan transaction report data submitted to the state library can be used to determine a monthly average.

35. On the average, monthly interlibrary loan requests prior to MCAT were approximately

_____incoming _____outgoing (number of items)

36. On the average, monthly interlibrary loan requests since implementing MCAT are approximately

_____incoming _____outgoing (number of items)

37. On the average, the monthly number of ALANET transactions is approximately

_____incoming _____outgoing (number of items)

38. List those MCAT features that are especially helpful.

39. List those MCAT features that are in need of improvement.

APPENDIX B

1006 Walnut Lane
Warrensburg, MO 64093
September 22, 1989

Dear Colleague:

MCAT, the Missouri Statewide Bibliographic Database, has been in Missouri libraries for approximately one year. It is assumed that MCAT has been used as an interlibrary loan verification and requesting tool. Perhaps it has been used for other purposes. What is the impact that MCAT has had on resource sharing in Missouri?

I am conducting an assessment survey of MCAT among the more than 200 libraries which received the database in the fall of 1988. My research is being sponsored by the Missouri State Library whose staff are keenly interested in the results in order to plan for future developments and enhancements to the database.

Will you take a few minutes of your time to assist me in this project? Please complete the enclosed questionnaire and return it to me in the self-addressed, stamped envelope. Responses of individual libraries will be kept completely confidential. Your questionnaire will be coded for identification and control purposes only. The results will be analyzed and a report will be sent to the Missouri State Library. If you would like a copy of a summary of the report, please include your name and address on a separate slip of paper. If for any reason your library is NOT using MCAT, please answer the first five questions only, indicating in question 5 why MCAT is not being used.

Your cooperation in this study will be greatly appreciated. Please complete and return the enclosed questionnaire by October, 15, 1989.

Please note: MCAT refers to the bibliographic database on CD-ROM. ALANET refers to the communications network used to transmit and receive interlibrary loan requests.

Thank you for your assistance.

Sincerely,

Mollie Niemeyer
1006 Walnut Lane
Warrensburg, MO 64093
Enclosure

APPENDIX C

Mollie Niemeyer
1006 Walnut Lane
Warrensburg, MO 64093

October 2, 1989

Dear Colleague:

You have recently received a questionnaire assessing the Missouri Statewide Bibliographic Database, MCAT. This follow-up letter is to re-emphasize the importance of this study regarding the future developments of the database. It is an opportunity for you to express your needs and concerns. Your input will have a direct impact on decisions to modify the database.

If you have already completed and returned the questionnaire, thank you for your prompt response. If you have not yet returned your questionnaire, your immediate reply will be greatly appreciated.

Thank you for your assistance in this very important project.

Sincerely,

Mollie Niemeyer

APPENDIX D

COMMENTS FROM RESPONDENTS: HELPFUL FEATURES OF MCAT

NOTE: Comments from each respondent are single-spaced.

1. Until there is subject access to OCLC, the state database has really filled a need.

2. The three methods of searching I use are easy to use.

3. The subject access the database provides is just wonderful. We have used it often to help students and faculty members locate material on a subject.

4. The feature for requesting blank monograph and serial forms in order to request material not in MCAT.

   The list of institutions holding the requested material is very informative -- and being able to select the host institution is helpful.

5. Not used enough to respond.

6. We use OCLC for interlibrary loan purposes and don't request items through MCAT. We haven't even looked at the database since our CD-ROM won't accept it.

7. Searching for books by subject.

8. The ability to locate libraries that have the materials we need.

9. To get responses the same day or the next day to requests.

10. Provision of blank ILL forms, express search.

11. It saves us a great deal of money because it cuts down tremendously the number of times we need to use OCLC. It also saves us typing time.

12. Directions for using system are better than most.

13. Anyword searching, call number listing.

14. Bibliographic information, location.

15. Holdings information separated by region. Call numbers included on record.

16. Use of laser discs, supplemental discs.

17. Express searching.

18. Having holdings on CD is helpful.

19. Subject searching.

20. Just the fact that we now have a system like this has been wonderful! We used to discourage our students from requesting ILL materials because we had to call libraries to see if they owned requested books, etc. We appreciate the capability to include a lending string. Response time has been good!

21. Verification for cataloging, subject search, anyword search, location of book in K.C. area for KCMLN, call number if requested from UMKC, ILL print form, printed from for KCMLN request.

22. The searching capabilities are good. I use MCAT to verify titles before going on OCLC.

23. The ability to search more libraries for more books in the state.

    The ability to do both "browse" and "express" searches parallels Books in Print on CD-ROM.

24. The browse and express modes of searching are very helpful in finding a particular author, title, or subject.

25. Subject searches, express mode, browse mode, anyword searches.

26. The feature we find especially helpful with MCAT is the listing of geographic locations. This also helps keep the expense to our patrons low.

27. All features are great.

28. Full bibliographic information on the book listed.

    Periodic updates of new holdings.

    Simplicity of system.

29. The ability to browse alphabetic lists of authors, titles and subjects, or to use express

30. The breakdown by decoding, the amount and diversity of subject material and the immediate confirmation of request locations.

31. LePac.

32. Original cataloging.

33. Being able to search just by the author is helpful. And subject requests are simpler to search this way.

34. I like the ability to know the status of an order within 24 hours.

35. Anyword searching.

36. MCAT is a great idea and if it was the only source of ILL it would be great. I'm sure with time it will improve as more listings are available.

37. Browse search is very useful!

38. Subject access to Missouri bibliographic records.

39. We like all MCAT features.

40. Finding Dewey Decimal Numbers if they are questionable. Also enjoy using Bookshelf.

41. The "express" mode, "anyword" searching.

42. We particularly like to be able to show patrons immediately what titles might be available for ILL and allow them to select their own titles (if possible). Speed of response is very gratifying in most cases. We still have the occasional frustration of no response.

43. Have primarily used Browse mode of searching with great success. Easy to use, clear instructions, fast.

44. Correct spelling not necessary on Browse. We also use it for retroconversion--more listed than Bibliofile.

45. Browse.

46. Unlimited resources available to patron.

47. Seems pretty satisfactory for our limited use.

48. Computer operated versus fiche.

49. LePac = Menu is fairly easy to use and read, as well as complete program, but it is rather slow. I like to be able to search by title, author, and subject. Anyword search is also helpful.
SmartComII = Very easy to use.

50. Use browse feature mostly. It's most useful for our purpose since we have mostly title/author requests.

51. Easy to use, subject access very helpful, saves time to verify with MCAT.

52. ALANET only: As a lender we prefer online requests to ALA form. As a lender we very much appreciate requests that are verified.

53. The ability to locate a particular title.

54. It's handy if you have a patron that wants a book on a specific subject, can search the MCAT Discs and find books that your patron may want and you can make a list of the books for them to view.

55. Location of book.

56. Express and browse modes.

57. Anyword, browse, express modes.

User friendly for the most part!

58. The CD-ROM discs are ok. Sure beats microfiche.

59. Anyword search, local call numbers.

60. Gives fast direct information on which libraries own the material we are searching for. Cuts out the need for "middle-man" network costs.

61. Book location.

62. Full bibliographic records, call numbers given, geographic locations given.

63. Knowing where books, etc. are held.

64. Most of our requests involve searching for a specific title, so the Browse Access is especially

helpful. The Patron usually has the author's name also. I very seldom need to use the Express mode.

65. We have access to more libraries than we did with the network.

66. The Browse function works well. The Express function is great, when it works. We sometimes have trouble with it.

67. MCAT is a useful bibliographic verification tool A combination of express mode and "anyword" searches is useful for known item searches.

68. Overall system has given our college a new, and increasingly important service.

APPENDIX E

COMMENTS FROM RESPONDENTS: MCAT IMPROVEMENTS NEEDED

NOTE: Numbered Comments from individuals are single-spaced.

1. I would like to see the State Library conduct some workshops on searching to help us learn to use Boolean and truncated searching in MCAT.

2. Compared to documentation from OCLC, what we have with MCAT is a joke.

3. The directories are just awful. The libraries are entered by library name instead of institution.

4. Too many "unrecoverable LePac error 10002 program terminated abnormally" messages --frustrating to be constantly restarting system.

5. I find it very difficult to gain access to ALANET. I don't get through on an average of 3-4 times a week. Once I get on, receiving ILL is no problem.

6. The function ALT + i constantly jams the system. A searcher frequently hs to ask for this command 5-10 times before the requested screen appears.

7. One disk instead of 5 would be nice. I am constantly changing disks. Also, it would be more convenient not to have to restart each disk when they are changed.

8. More authority control needed, e.g same bibliographic item may have more than one entry.

9. We need to be able to check and change our requests before we send or delete, if I make too many mistakes, I retype my request.

   It would be nice to have a calendar reminder of due dates computerized.

   The program should check the code as we input the beginning of the request; I have had requests for holdings I didn't have and when I checked to see why, the requester was off a number when making the request. I have done that as well.

10. Being able to use Phillips CD-ROM player.

11. It would be nice if we could search the entire database at once.

12. User be reminded to press F10 twice when changing discs.

    A lot of times, items can be located when using the BROWSE mode but not the EXPRESS mode. Why? (I don't trust the EXPRESS mode).

    When a library no longer owns an item because of weeding or lost, the bib. record remains the same.

13. Any way to go back to DOS without using CTRL + ALT + DEL?

14. Switching from disc to disc without having to re-enter the item to be searched for.

    Improved reliability of "hits" so that person does not have to scroll up or down to find item.

    Longer time before screen returns to opening MCAT display.

    Clarification in listing of just what format IS acceptable to lending library: OCLC, MCAT, Paper, etc.

    Inactive lenders should be programmed out of system so requests don't dead-end in their files.

    Does ALANET automatically bump the request along the string if there is no response from a lender? It should.

15. Need to be allowed to correct typos more easily. Difficult to back up and correct mistyped words.

16. Sometimes when searching a book under author, I don't receive a record but by searching same book under title, I receive the record with the author's name. I feel the author search should have retrieved.

17. Many records are incorrect.

    Searching by date is a hassle, why couldn't the discs have been set up alphabetically? Many of our searches have unknown publication dates or no dates given on book. Patrons usually know author/title, few know date of publication, then we must deal with

reprints, editions, etc. Even with the supplements, the number of discs to search would be decreased by using alphabetical listings.

18. The changing of the discs is a pain. There needs to be an easier way to accomplish this. Also there needs to be a logoff procedure. Right now we have to re-boot the system to get out of LePac.

19. Disc switching.

    Termination at odd times.

    Too slow.

    Should have institution name rather than library name listed.

20. I realize arrangement by date was an economic decision, BUT it is cumbersome, confusing and irritatingly time-consuming. PLEASE consider re-configuration! (note: this is from the folks that USE the system, not the executives who bought it!)

    Non-consistent cataloging is maddening!!!

21. A smooth was to exit back to one's menu or shell program after using MCAT.

22. Response time is a little slow.

23. To save time it would be nice if the updates could be compiled every 6 months.

24. The ALANET system is difficult to use. The directions fail to mention what to do if you make a typo and fail to correct it before hitting return key.

    The method to check status of requests if difficult to use.

25. Some software features used with ALANET could be improved. Such as: Anyone can accidentally delete a request from the system. Each library has to forward a request if needed. An automatic forwarding after 2 or 3 days would possibly speed up the requesting process.

26. Cumbersome to use the different CD's. Would it be possible to have an index to the entire set included on the latest CD?

27. ID or MCAT codes included on the screen with the book record would be much more useful than regional codes.

    An institution list should be available, as well as library name list since the on-screen record gives name of institution not library. See references in the Directory are time consuming and cumbersome. A line for patron name on ALANET would be helpful.

28. I would like to see feature similar to Philnet - where the system checks cost policies and assigns the requests to the appropriate location.

29. We do not use our MCAT because of problems installing the hardware in our computer. We have vacant slots taken up with OCLC and the telephone modem, and it will not accept the MCAT board.

    The second problem for us is that our older titles were not entered into the statewide database because of lack of funds and time at the network level. Therefore the number of people that would be requesting from us is negligible for the present time. However, since we are now doing our cataloging on OCLC, our newer titles will be on the tapes that the State Library receives/purchases from them. From the training sessions, and the conversations that I have with librarians in our area, I am not greatly enamored with MCAT. I think the state would be much better served through group access to OCLC.

30. Should be able to search several discs without having to retype search.

    Notebook directory should be organized so you can look up library name code as given on MCAT and find all info necessary for an ILL. Even better ALANET code for each library that has a book should be shown next to library name on screen showing book info.

31. Fewer CD-ROM discs. Being able to move from one disc to another without reloading indexes each time.

32. I would like to be able to exit from the LePac software without having to restart the computer.

33. We do not do very many searches for interlibary loans, but so far we have been satisfied with the results.

34. A main index would be helpful. Loading CD discs at this point would help.

35. Our biggest concern is with ALANET and the problems associated with it such as: screens are hard to read and understand. ALANET requesting is time consuming and it does not allow backup to correct messages.

36. One feature we feel needs improvement is the various discs. It would be easier if all the past information were all on one disc instead of four.

37. Libraries not responding to requests (not many).

    A particular selection is listed several ways under "author search" i.e. White, Arthur or White Arthur L.,or White A. L. causing unnecessary changing of screens to determine availability of one book.

    Doesn't appear to take into account entries that have been weeded from a library's collection --by MCAT you must still assume a library holds the book.

38. Changing discs is time-consuming.

39. Would like to see periodicals holdings listed.

40. So far there isn't any feature I don't like.

41. Sometimes on the breakdowns of authors there are two or more listings for the same author or title, all of this information should be listed under one heading.

    After the prompt is answered the disc immediately goes to the menu of the disc decades, you have to backtrack to load the disc.

42. Reporting deleted records.

43. Need ALA number as well, name on disc.

44. Screen display could be brighter -- on our amber monitor, have to turn both controls all the way up to see much of anything-- and then have to re-adjust for the other CD-ROMS we use.

    Our only significant use of MCAT is to help patrons verify if a local library owns a book they are looking for. So our use is not really "public

access catalog"--it is used only about once a week, on a workstation that is normally used for Wilsondiscs. Our ILL department rarely uses it. We have used it maybe twice in a year to verify our own holdings when our computer was down.

45. Needs a better way to exit the LePac program.

46. An index laser disc to the entire data base.

The response time is too slow between screens when checking for holdings.

47. MCAT is slow, very slow, and time consuming. We need to verify and pull up a work form all in one step.

Also sometimes you can locate a title by an author but can't find it on a title search--all on the same disc.

Also the new list of participating libraries is not very well done. On MCAT you pull up the holding listed as a certain college library and on the list you have listed the college libraries by the name of the library, such as Estep instead of Southwest Baptist University or Kent Library instead of Southeast Missouri University. This is very confusing. Also River Bluffs Regional isn't even on the list.

In closing, I find MCAT to have been a good idea and it is good that we can find the listings of the libraries in Missouri but it is a program that definitely needs much improvement.

48. The training sessions were great. Our state consultant has done a great job in training us to use what is offered.

49. Time to load and change discs is more extensive than I would like.

Wish more libraries were on database and ALANET.

Would like out-of-state access.

50. EXPRESS searching.

Downloading to disc.

Logoff method.

Instructions in general.

Combining duplicate bib records.

Problem of multiple discs and changing.

51. A way to return to DOS.

52. Having to change discs. Would prefer everything available on the hard disc drive if possible.

53. Have not found way to exit back to DOS from MCAT -- have to reboot the computer.

54. I wish there was a way where one disk would have the index, and then refer you to which year the record is in. Right now, if you don't know the approximate copyright, then you keep searching until you run out of discs.

55. We have gotten into situations twice where MCAT stalls in the "searching" mode and we have to turn off the system and reboot. It happens with certain searches and is not apparently a hardware problem.

An overall index on one disc would be very useful.

56. Numerous entries under same author or title when searching BROWSE mode. More time consuming than seeing all information under single entry.

57. Changing discs and time needed to re-enter request.

Our records need to be on, to become lenders as well as borrowers.

58. I would like to see all holdings on one disc.

59. Seems pretty satisfactory for our limited use.

60. Removal of de-acquisitions as needed.

Arrangement by date is cumbersome.

More library holdings needed.

61. Too many discs in LePac for searching, too time consuming.

While we realize the problem will eventually be solved, it is frustrating not to fill most of the requests now as we could with the network.

62. We use SMARTCOM II, need better updated manual for trouble shooting especially when "strange" things appear on screen during transmission.

63. Getting to be too many discs.
Too many different entries for the same title. Time consuming to call up each entry from various libraries.

64. Disc switching is very time-consuming.

We have many requests for newer books which are not available on disc.

Libraries (U. of MO) cannot be accessed on ALANET. It takes a lot of time to send ILL forms to these libraries.

65. ALANET is confusing to decipher and train staff.

Automatic forwarding of requests to next library.

66. Perhaps fewer discs to check.

Comment: The present system with its changes has helped to obtain individual titles, but it has cut off access to subject materials, or answers to reference questions not available in smaller libraries. We are at the mercy of some of the friendly librarians of the large institutions. In cases like this most of us are not averse to paying on a per request/time usage basis but with the present situation we wonder if we dare ask.

67. The software Microsoft Works. There should have been a seminar to help the libraries get acquainted wit the software, if other libraries are like ours the software arrives (ours came without instructions on how to load to hard disk) then you are expected to immediately know how to use the software. Most smaller libraries are short staffed and usually do not have one person specifically for one task, that means the person who is responsible for ILL must fit learning the software into their schedule along with every thing else they have to learn for the statewide database, and their regular duties.

68. To return to menu without shutting down the computer.

69. Most problems we have had are due to allotted time we have to search (vs) the number of discs you have

to search!

Titles found on earlier discs are not always at those libraries anymore; due to overdues, lost books, etc! This hurts fill rates and also takes up more time, paperwork, etc.

Also patrons, who are needing information quickly, tend to cancel requests more frequently with this system than when we were using a network. However, this may not be on account of MCAT, but on patron's understanding due to media and promotions encouraging the average person "Libraries have or have access to everything". Whereas we usually find some information or a book on the topic or related to the topic, it is generally not what the patron really needs.

MCAT does not replace the personal reference searches network librarians could give. It also does not give enough information about the books you are requesting. It would be helpful to have...accurate information.

Subject headings on all displays.

Age levels on all displays.

I have also found books listed as reference which are not and some marked as being non-reference which were Reference, etc.

Getting to "loading indexes" is hard unless you are familiar with the procedure. Basically, it is necessary to be assisted with every phase of loading and unloading the discs the first time.

70. Perhaps a CD-ROM index.

Eliminate multiple holdings by individual libraries.

Changing of disc involves a soft start. (unless I am doing something wrong).

Some libraries have holdings listed, but do not have an ALA number.

71. You have to exit the entire program, then start it up again to search another CD disc. If you don't, the answer on the second disc is always "not found". This is what happens on our computer, at any rate.

72. Needs to be more accurate when searching--as in not finding a book under the author in browse but finding it on the same disc under author in express. (This is just an occasional annoyance).

73. Some book is listed 4 or 5 times so that one search becomes 5.

    Libraries who no longer own a book are listed as having a book.

74. Procedure for changing discs.

75. It takes a lot of time to search the CD-ROM discs if date is unknown. Concentration on a smaller number of discs, if possible, would e helpful.

76. Get all of the books of certain dates on the same disc so you don't have to look more than once for the same book.

    Comment: with network, I could do in 15 minutes what it takes one and a half hours to do with MCAT/ALANET. Do I like the change? NO!

77. The whole process is very time consuming.

78. The EXPRESS mode does not always work. Also, it would be nice to have the MCAT information uploaded to ALANET, rather than having to key in the information. MCAT will also be more valuable when someone figures out how to add on our holdings. They still are not on the discs.
    (Please note: We have a lot of trouble with ALANET. It definitely needs improvement.)

79. Overall database quality if poor: mis-spelled words, non-adherance to even minimal AACR2 and ISBD rules, not to mention MARC tagging. Continuing education for catalogers and public services librarians in contributing to and using MCAT is essential.

    Disc swapping is too time consuming. Re-mastering the database "Bibliofile style", that is, with indexes on one disc and the database spread across several others on CD-ROM would be an improvement.

    What can Brodart do to clean up the database? Even removing mis-spelled words would be an improvement.

MCAT would be a more useful tool with more holdings from public libraries included.

Communication between the State Library and libraries around Missouri on the use of MCAT, contributions to MCAT, plans for MCAT is non-existent. For example, what is the progress of converting the states's collective holdings to MARC for inclusion in MCAT? What support is available from the State Library for this conversion? Why hasn't the statewide fax directory for libraries been updated by the State Library and distributed?

Is the State Library going to sponsor a telecommunications system for interlibrary loan or not? The ILL portion of ALANET pales in comparison to the OCLC ILL subsystem. Isn't there a better way to inform libraries of the need to upgrade DOS version and purchase Crosstalk (for the as yet unreleased and unseen Brodart ILL director system than word of mouth?

When will our State Librarian, have the courage to visit public libraries and librarians and listen to their concerns (especially regarding state support) and ideas about the role of the State Library?

80. The whole thing is BAD!

81. Procedure for changing discs.